

SEQUENCE LISTING



(1) GENERAL INFORMATION:

(i) APPLICANT: SHAI, Yechiel
OREN, Ziv

(ii) TITLE OF INVENTION: ANTIPATHOGENIC SYNTHETIC PEPTIDES AND COMPOSITIONS COMPRISING THEM

(iii) NUMBER OF SEQUENCES: 99

(iv) CORRESPONDENCE ADDRESS:

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(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: 09/367,714
(B) FILING DATE: 14-JAN-2000

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: PCT/IL97/00066
(B) FILING DATE: 20-FEB-1997

vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: PCT/IL98/00081
(B) FILING DATE: 19-FEB-1998

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 33 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 1

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: group(7, 18, 19)
(D) OTHER INFORMATION: /product= "D-amino acid residues"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:33

(D) OTHER INFORMATION:/product= "OTHER"

/note= "two aminoethylamino groups are attached at the C-terminus"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15

Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30

Glu

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

B (vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 2

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(7, 18, 19)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:22

(D) OTHER INFORMATION:/product= "OTHER"

/note= "an aminoethylamino group is attached at the C-terminus"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15

Thr Leu Leu Ser Ala Val
20

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 amino acids

(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 3

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION:group(7, 18, 19)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val
 20

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 4

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION:group(8, 19, 20)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION:23
(D) OTHER INFORMATION:/product= "OTHER"

/note= "an aminoethylamino group is attached at the C-terminus"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

Lys Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe
1 5 10 15
Lys Thr Leu Leu Ser Ala Val
 20

(2) INFORMATION FOR SEQ ID NO: 5:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 24 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 5

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(9, 20, 21)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:24
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "an aminoethylamino group is attached at the C-terminus"

B' (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

Lys Lys Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu
1 5 10 15

Phe Lys Thr Leu Leu Ser Ala Val
 20

(2) INFORMATION FOR SEQ ID NO: 6:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 24 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 6

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(9, 20, 21)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

Lys Lys Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu
 1 5 10 15

Phe Lys Thr Leu Leu Ser Ala Val
 20

(2) INFORMATION FOR SEQ ID NO: 7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 11 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 7

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:7
 (D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUE"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:11
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "AN AMINOETHYLAMINO GROUP IS ATTACHED AT THE C-TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 8:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 33 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(v) FRAGMENT TYPE: linear

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 8

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:33
 (D) OTHER INFORMATION:/product= "OTHER"

/note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED AT THE C-TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15

Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30

Glu

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 9

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:13
(D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUE"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:33
(D) OTHER INFORMATION:/product= "OTHER"
/note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED AT THE C-TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15

Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30

Glu

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 amino acids
(B) TYPE: amino acid

(C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(v) FRAGMENT TYPE: linear

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 10

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(5, 19)
 (D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUES"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:33
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED AT THE C-TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

B.

Gly	Phe	Phe	Ala	Leu	Ile	Pro	Lys	Ile	Ile	Ser	Ser	Pro	Leu	Phe	Lys
1				5				10					15		
Thr	Leu	Leu	Ser	Ala	Val	Gly	Ser	Ala	Leu	Ser	Ser	Ser	Gly	Gly	Gln
			20				25						30		
Glu															

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 33 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(v) FRAGMENT TYPE: linear

(vii) IMMEDIATE SOURCE:
 (A) LIBRARY: peptide 11

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(7, 19)
 (D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUES"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site

(B) LOCATION:33
(D) OTHER INFORMATION:/product= "OTHER"
/note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED AT THE C-
TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30
Glu

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 12

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:7
(D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUE"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:33
(D) OTHER INFORMATION:/product= "OTHER"
/note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED AT THE C-
TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30
Glu

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 13

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 7
- (D) OTHER INFORMATION: /product= "D-AMINO ACID RESIDUE"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15

Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
 20 25 30

Glu

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 14

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(18, 19)
- (D) OTHER INFORMATION: /product= "D-AMINO ACID RESIDUES"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 33
- (D) OTHER INFORMATION: /product= "OTHER"
/note= "TWO AMINOETHYLAMINO GROUPS ARE ATTACHED TO THE C-

TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30
Glu

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 17

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:7
(D) OTHER INFORMATION:/product= "D-AMINO ACID RESIDUE"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:22
(D) OTHER INFORMATION:/product= "OTHER"
/note= "AN AMINOETHYLAMINO GROUP IS ATTACHED AT THE C-
TERMINUS"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val
20

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 18

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(5, 8, 17, 21)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:26
(D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

Gly	Ile	Gly	Ala	Val	Leu	Lys	Val	Leu	Thr	Thr	Gly	Leu	Pro	Ala	Leu
1				5					10					15	
Ile	Ser	Trp	Ile	Lys	Arg	Lys	Arg	Gln	Gln						
				20				25							

B. (2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 19

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(5, 8, 17, 21)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

Gly	Ile	Gly	Ala	Val	Leu	Lys	Val	Leu	Thr	Thr	Gly	Leu	Pro	Ala	Leu
1				5					10					15	
Ile	Ser	Trp	Ile	Lys	Arg	Lys	Arg	Gln	Gln						
				20				25							

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 amino acids

(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 20

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(5, 8, 17, 21)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:22
(D) OTHER INFORMATION:/product= "OTHER"
/note= "an aminoethylamino group is attached at the C-terminus"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu
1 5 10 15
Ile Ser Trp Ile Lys Arg
 20

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 21

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(2, 5, 14, 18)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:19
(D) OTHER INFORMATION:/product= "OTHER"
/note= "an aminoethylamino group is attached at the C-terminus"

B.

(2) INFORMATION FOR SEQ ID NO: 22:

(ii) MOLECULE TYPE: peptide

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(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION:group(3, 4, 8, 10)
      (D) OTHER INFORMATION:/product= "D-amino acid residues"
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(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION:12
      (D) OTHER INFORMATION:/product= "OTHER"
          /note= "the carboxyl group at the C-terminus is replaced by
an amino group"
```

Lys Leu Leu Leu Leu Leu Lys Leu Leu Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 23:

(ii) MOLECULE TYPE: peptide

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(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION:group(3, 4, 8, 10)
      (D) OTHER INFORMATION:/product= "D-amino acid residues"
```

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:12
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

Lys Leu Leu Leu Lys Leu Leu Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 24

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(3, 4, 8, 10)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:12
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 25

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 4, 8, 10)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:12
- (D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

Lys Lys Leu Leu Lys Leu Lys Leu Lys Leu Lys Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 26

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(1, 2, 5, 6, 7, 9, 11, 12)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:12
- (D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

Lys Leu Leu Leu Lys Leu Leu Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 27

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(1, 2, 5, 6, 7, 9, 11, 12)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:12
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "the carboxyl group at the C-terminus is replaced by
 an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

Lys	Leu	Leu	Leu	Lys	Leu	Lys	Leu	Lys	Leu	Leu	Lys
1				5					10		

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 6 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 28

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(2, 4)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Lys	Leu	Leu	Leu	Leu	Lys
1				5	

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 29

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(2, 4, 6)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

Lys Leu Leu Leu Lys Leu Leu Lys
1 5

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 30

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(2, 6, 8, 11)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 31

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(2, 3, 4, 8, 10, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 32:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 32

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 5, 8, 9, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 33:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 33

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 4, 8, 10)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:12
- (D) OTHER INFORMATION:/product= "OTHER"

an amino group" /note= "the carboxyl group at the C-terminus is replaced by

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

Lys Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 34:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 34

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 4, 8, 10)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:12
- (D) OTHER INFORMATION:/product= "OTHER"

an amino group" /note= "the carboxyl group at the C-terminus is replaced by

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Lys Val Val Val Lys Val Val Val Lys Val Val Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 35

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(2, 6, 8, 11)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

Lys Val Val Val Lys Val Lys Val Lys Val Val Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 36

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(1..4, 8, 10, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

Lys Val Val Val Lys Val Lys Val Lys Val Val Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 37

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 5, 8, 9, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

Lys Val Val Val Lys Val Lys Val Lys Val Val Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 38:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 38

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(2, 6)
 - (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Lys Leu Ile Leu Lys Leu
1 5

(2) INFORMATION FOR SEQ ID NO: 39:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 39

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(2, 6)
 - (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

Lys Val Leu His Leu Leu
1 5

(2) INFORMATION FOR SEQ ID NO: 40:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 40

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: group(2, 6)

(D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Leu Lys Leu Arg Leu Leu
1 5

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 41

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "D-amino acid residue"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

Lys Pro Leu His Leu Leu
1 5

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 42

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(2, 3, 4, 6)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

Lys Leu Ile Leu Lys Leu Val Arg
1 5

(2) INFORMATION FOR SEQ ID NO: 43:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 43

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(2, 4, 5, 6)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

Lys Val Phe His Leu Leu His Leu
1 5

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 44

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(1, 2, 4, 6, 7)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

His Lys Phe Arg Ile Leu Lys Leu
1 5

B.

B.

- (A) LENGTH: 8 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

B.

- (B) CLONE: peptide 45

B.

- (A) NAME/KEY: Modified-site
(B) LOCATION:5
(D) OTHER INFORMATION:/product= "D-amino acid residue"

B.

Lys Pro Phe His Ile Leu His Leu
1 5

B.

B.

- (A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

B.

- (B) CLONE: peptide 46

B.

- (A) NAME/KEY: Modified-site
(B) LOCATION:group(1, 2, 6, 8, 11)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

B.

Lys Ile Ile Ile Lys Ile Lys Ile Lys Ile Ile Lys
1 5 10

B.

B.

- (A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 47

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(2, 3, 4, 8, 10, 11)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

Lys Ile Ile Ile Lys Ile Lys Ile Lys Ile Ile Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 48

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(1, 3, 5, 8, 9, 11)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

Lys Ile Ile Ile Lys Ile Lys Ile Lys Ile Ile Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 49:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 49

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 7
- (D) OTHER INFORMATION: /product= "D-amino acid residue"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

Lys Ile Pro Ile Lys Ile Lys Ile Lys Ile Pro Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 50:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 50

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(6, 10)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

Lys Ile Pro Ile Lys Ile Lys Ile Lys Ile Val Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 51:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 51

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(2, 4, 6, 8, 11)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

Arg Ile Ile Ile Arg Ile Arg Ile Arg Ile Ile Arg

1 5 10

(2) INFORMATION FOR SEQ ID NO: 52:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 52

- (ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(2, 3, 4, 6, 7, 8, 10, 11)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

Arg Ile Ile Ile Arg Ile Arg Ile Arg Ile Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 53:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 53

- (ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(1, 3, 5, 8, 9, 11)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

Arg Ile Ile Ile Arg Ile Arg Ile Arg Ile Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 54:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 54

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(2, 6, 8, 11)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

Arg	Ile	Val	Ile	Arg	Ile	Arg	Ile	Arg	Leu	Ile	Arg
1				5					10		

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 55

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(2, 3, 4, 8, 10, 11)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

Arg	Ile	Ile	Val	Arg	Ile	Arg	Leu	Arg	Ile	Ile	Arg
1				5					10		

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 56

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(3, 5, 8, 9, 11)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Arg Ile Gly Ile Arg Leu Arg Val Arg Ile Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 57

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(2, 6, 8, 11)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

Lys Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 58:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 58

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(2, 3, 4, 8, 10, 11)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Arg Ile Ala Val Lys Trp Arg Leu Arg Phe Ile Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 59:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 59

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(3, 5, 8, 9, 11)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

Lys Ile Gly Trp Lys Leu Arg Val Arg Ile Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 60:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 60

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(2, 4, 7, 10, 11)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

Lys Lys Ile Gly Trp Leu Ile Ile Arg Val Arg Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 61:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 amino acids
(B) TYPE: amino acid

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 61

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(2, 6, 8, 11, 13)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

Arg Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg Ile Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 62

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(1..4, 8, 10, 11, 13, 14)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

Arg Ile Ile Val Arg Ile Arg Leu Arg Ile Ile Arg Val Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 63:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 63

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 5, 8, 9, 11, 14)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

Arg Ile Gly Ile Arg Leu Arg Val Arg Ile Ile Arg Arg Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 64

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(1, 2, 6, 7, 11, 15, 16)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

Lys Ile Val Ile Arg Ile Arg Ala Arg Leu Ile Arg Ile Arg Ile Arg
1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 65

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(2, 3, 4, 7, 8, 10, 11, 13, 14, 16)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

Arg Ile Ile Val Lys Ile Arg Leu Arg Ile Ile Lys Lys Ile Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 66:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 66

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(1, 3, 5, 8, 9, 11, 13, 14, 16)
 - (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

Lys Ile Gly Ile Lys Ala Arg Val Arg Ile Ile Arg Val Lys Ile Ile
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 67:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 67

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(2, 3, 4, 7, 8, 10, 11, 13, 14, 16)
 - (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

Arg Ile Ile Val His Ile Arg Leu Arg Ile Ile His His Ile Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 68:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 16 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 68

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: group(1, 3, 5, 8, 9, 11, 13, 14, 16)
 (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

His	Ile	Gly	Ile	Lys	Ala	His	Val	Arg	Ile	Ile	Arg	Val	His	Ile	Ile
1				5					10					15	

B.
 (2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 16 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 69

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: group(2, 4, 7, 9, 10, 11, 13, 14, 16)
 (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

Arg	Ile	Tyr	Val	Lys	Ile	His	Leu	Arg	Tyr	Ile	Lys	Lys	Ile	Arg	Leu
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 16 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 70

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(1, 3, 5, 8, 9, 11, 13, 14, 16)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Lys	Ile	Gly	His	Lys	Ala	Arg	Val	His	Ile	Ile	Arg	Tyr	Lys	Ile	Ile
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 71

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION:group(2, 3, 4, 7, 8, 10, 11, 13, 14, 16)

(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

Arg	Ile	Tyr	Val	Lys	Pro	His	Pro	Arg	Tyr	Ile	Lys	Lys	Ile	Arg	Leu
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO: 72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 72

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 5, 8, 9, 11, 13, 14, 16)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

Lys Pro Gly His Lys Ala Arg Pro His Ile Ile Arg Tyr Lys Ile Ile
1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 73:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 73

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(2, 6, 7, 11, 15, 16, 18)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

Lys Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg Ile Arg Ile Arg
1 5 10 15

Lys Ile Val

(2) INFORMATION FOR SEQ ID NO: 74:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 74

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(2, 3, 4, 6, 7, 8, 10, 11, 13, 14, 16, 17,

19)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

Arg Ile Ile Val Lys Ile Arg Leu Arg Ile Ile Lys Lys Ile Arg Leu
1 5 10 15

Ile Lys Lys

(2) INFORMATION FOR SEQ ID NO: 75:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 75

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(3, 4, 5, 8, 9, 11, 13, 14, 16, 17, 18)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

Lys Ile Gly Trp Lys Leu Arg Val Arg Ile Ile Arg Val Lys Ile Gly
1 5 10 15

Arg Leu Arg

(2) INFORMATION FOR SEQ ID NO: 76:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 76

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:group(2, 6, 7, 11, 15, 16, 18, 20, 24, 25)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

Lys Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg Ile Arg Ile Arg
1 5 10 15
Lys Ile Val Lys Val Lys Arg Ile Arg
20 25

(2) INFORMATION FOR SEQ ID NO: 77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 77

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(2, 3, 4, 6, 7, 8, 10, 11, 13, 14, 16, 17, 19..22, 24, 25)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

Arg Phe Ala Val Lys Ile Arg Leu Arg Ile Ile Lys Lys Ile Arg Leu
1 5 10 15
Ile Lys Lys Ile Arg Lys Arg Val Ile Lys
20 25

(2) INFORMATION FOR SEQ ID NO: 78:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 78

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(3, 4, 5, 8, 9, 11, 13, 14, 16, 17, 18, 22, 23, 24, 27, 28, 30)
- (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

Lys Ala Gly Trp Lys Leu Arg Val Arg Ile Ile Arg Val Lys Ile Gly
1 5 10 15
Arg Leu Arg Lys Ile Gly Trp Lys Lys Arg Val Arg Ile Lys
20 25 30

(2) INFORMATION FOR SEQ ID NO: 79:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 79

B (ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: group(2..5, 7, 8, 10, 11, 13, 14, 16)
(D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

Arg Ile Tyr Val Lys Pro His Pro Arg Tyr Ile Lys Lys Ile Arg Leu
1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 80:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 80

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: group(1, 2, 3, 5, 7..11, 13, 14, 16)
(D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

Lys Pro Gly His Lys Ala Arg Pro His Ile Ile Arg Tyr Lys Ile Ile
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 81:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 81

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: group(2, 4..8, 10..13, 15, 16, 18)
 (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

Lys Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg Ile Arg Ile Arg
 1 5 10 15

Lys Ile Val

(2) INFORMATION FOR SEQ ID NO: 82:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 82

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: group(2, 3, 4, 6..11, 13, 14, 16, 17, 19)
 (D) OTHER INFORMATION: /product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

Arg Ile Ile Val Lys Ile Arg Leu Arg Ile Ile Lys Lys Ile Arg Leu
 1 5 10 15

Ile Lys Lys

(2) INFORMATION FOR SEQ ID NO: 83:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 83

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION:group(2..5, 7, 8, 10, 11, 13, 14, 16)
 - (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

Arg Ile Tyr Val Ser Lys Ile Ser Ile Tyr Ile Lys Lys Ile Arg Leu
1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 84:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 84

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION:group(2, 4..8, 10..13, 15, 16, 18)
 - (D) OTHER INFORMATION:/product= "D-amino acid residues"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Lys Ile Val Ile Phe Thr Arg Ile Arg Leu Thr Ser Ile Arg Ile Arg
1 5 10 15

Ser Ile Val

(2) INFORMATION FOR SEQ ID NO: 85:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 85
- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(1, 2, 3, 5, 7..11, 13, 14, 16)
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

Lys	Pro	Ile	His	Lys	Ala	Arg	Pro	Thr	Ile	Ile	Arg	Tyr	Lys	Met	Ile
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO: 86:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: circular
- (ii) MOLECULE TYPE: peptide
- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 86
- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(9, 20, 21)
 - (D) OTHER INFORMATION:/product= "D-amino acid residues"
- (ix) FEATURE:
 - (D) OTHER INFORMATION:/product= "OTHER"
 - /note= "the N-terminal Cys forms a disulfide bond with the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Cys	Lys	Gly	Phe	Phe	Ala	Leu	Ile	Pro	Lys	Ile	Ile	Ser	Ser	Pro	Leu
1				5					10					15	
Phe	Lys	Thr	Leu	Leu	Ser	Ala	Val	Cys							
								20	25						

(2) INFORMATION FOR SEQ ID NO: 87:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 26 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: circular

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 87

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(10, 21, 22)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "the N-terminal Cys forms a disulfide bond with
 the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Cys Lys Lys Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro
 1 5 10 15
 Leu Phe Lys Thr Leu Leu Ser Ala Val Cys
 20 25

(2) INFORMATION FOR SEQ ID NO: 88:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 27 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: circular

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
 (B) CLONE: peptide 88

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION:group(11, 22, 23)
 (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
 (D) OTHER INFORMATION:/product= "OTHER"
 /note= "the N-terminal Cys forms a disulfide bond with
 the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Cys Lys Lys Lys Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser
 1 5 10 15

Pro Leu Phe Lys Thr Leu Leu Ser Ala Val Cys
 20 25

(2) INFORMATION FOR SEQ ID NO: 89:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: circular

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 89

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(3, 7, 9, 12, 14)
 - (D) OTHER INFORMATION: /product= "D-amino acid residues"

- (ix) FEATURE:
 - (D) OTHER INFORMATION: /product= "OTHER"
 /note= "the N-terminal Cys forms a disulfide bond with
 the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Cys Arg Ile Val Ile Arg Ile Arg Ile Arg Leu Ile Arg Ile Arg Cys
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 90:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 18 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: circular

(ii) MOLECULE TYPE: peptide

- (vii) IMMEDIATE SOURCE:
 - (B) CLONE: peptide 90

- (ix) FEATURE:
 - (A) NAME/KEY: Modified-site
 - (B) LOCATION: group(2, 3, 4, 6, 8..12, 14, 15, 17)
 - (D) OTHER INFORMATION: /product= "D-amino acid recidues"

- (ix) FEATURE:
 - (D) OTHER INFORMATION: /product= "OTHER"

/note= "the N-terminal Cys forms a disulfide bond with the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Cys Lys Pro Gly His Lys Ala Arg Pro His Ile Ile Arg Tyr Lys Ile
1 5 10 15
Ile Cys

(2) INFORMATION FOR SEQ ID NO: 91:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: circular

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 91

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: group(3, 4, 5, 7, 8, 9, 11, 12, 14, 15, 17, 18, 20..23, 25, 26)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (D) OTHER INFORMATION:/product= "OTHER"
/note= "the N-terminal Cys forms a disulfide bond with the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

Cys Arg Phe Ala Val Lys Ile Arg Leu Arg Ile Ile Lys Lys Ile Arg
1 5 10 15
Leu Ile Lys Lys Ile Arg Lys Arg Val Ile Lys Cys
20 25

(2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 92

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(4, 5, 9, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

(D) OTHER INFORMATION:/product= "OTHER"
/note= "the N-terminal Cys forms a disulfide bond with
the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Cys	Lys	Leu	Leu	Leu	Lys	Leu	Leu	Leu	Lys	Leu	Leu	Lys	Cys
1				5				10					

(2) INFORMATION FOR SEQ ID NO: 93:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

(B) CLONE: peptide 93

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(4, 5, 9, 11)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

(D) OTHER INFORMATION:/product= "OTHER"
/note= "the N-terminal Cys forms a disulfide bond with
the C-terminal Cys"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

Cys	Lys	Leu	Leu	Leu	Lys	Leu	Lys	Leu	Lys	Leu	Leu	Lys	Cys
1				5				10					

(2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:

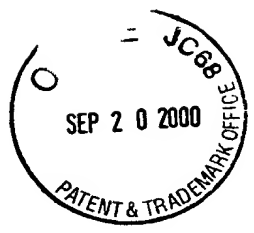
- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 94

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: group(3, 4, 8, 10)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
(D) OTHER INFORMATION:/product= "OTHER"
/note= "cyclic peptide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Lys Leu Leu Leu Lys Leu Leu Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 95

(ix) FEATURE:
(D) OTHER INFORMATION:/product= "cyclic pepetide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 96 (monomer peptide 23C)

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 94

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: group(3, 4, 8, 10)
(D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:
(D) OTHER INFORMATION:/product= "OTHER"
/note= "cyclic peptide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Lys	Leu	Leu	Leu	Lys	Leu	Leu	Leu	Lys	Leu	Leu	Lys
1				5					10		

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 95

(ix) FEATURE:
(D) OTHER INFORMATION:/product= "cyclic pepetide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

Lys	Leu	Leu	Leu	Lys	Leu	Lys	Leu	Lys	Leu	Leu	Lys
1				5					10		

(2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: peptide 96 (monomer peptide 23C)

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 4, 8, 10)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:13
- (D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

Lys Leu Leu Leu Lys Leu Leu Leu Lys Leu Leu Lys Cys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 97:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:

- (B) CLONE: peptide 97 (monomer peptide 24C)

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:group(3, 4, 8, 10)
- (D) OTHER INFORMATION:/product= "D-amino acid residues"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION:13
- (D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

Lys Leu Leu Leu Lys Leu Lys Leu Lys Leu Leu Lys Cys
1 5 10

(2) INFORMATION FOR SEQ ID NO: 98:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: PARDAXIN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
1 5 10 15
Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln
20 25 30
Glu

(2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vii) IMMEDIATE SOURCE:
(B) CLONE: Melittin

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION:26
(D) OTHER INFORMATION:/product= "OTHER"
/note= "the carboxyl group at the C-terminus is replaced by
an amino group"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu
1 5 10 15
Ile Ser Trp Ile Lys Arg Lys Arg Gln Gln
20 25